WPE-796

Digital Signage Engine Box

Q57 Chipset

USER'S MANUAL

P/N: 205G000WPE7960, V1.0

Copyright© 2011. All rights reserved

Acknowledgments

- Intel® Core i are registered trademarks of Intel® Corporation.
- IBM, PC/AT, PS/2 are trademarks of International Business Machines Corporation.
- Microsoft® Windows is a registered trademark of Microsoft® Corporation.
- RTL is a trademark of Realtek Semi-Conductor Co., Ltd.
- Award is a registered trademark of Award Software International, Inc.

All other product names or trademarks are properties of their respective owners.

Safety Instructions

Thank you for purchasing the WPE-796 unit. We wish that this unit will be durable and reliable in providing your digital signage application needs. Please follow the instructions below to ensure the unit continues to have high performance.

1. Please read this manual carefully and remember to keep this manual for future reference.
2. Please disconnect this equipment from power outlet before cleaning. Don‘t use liquid or sprayed detergent for cleaning.
3. If the unit does fall to the ground, immediately turn the power off and disconnect cords. Then contact a service technician for repairs. Continual use of the unit may result cause a fire or electric shock. Also, do not repair the unit on your own.
4. If you wish to mount the unit, remember to use only the mounting hardware recommended by the manufacturer.
5. This unit must operate on a power source as shown on the specification label. If you are not sure what type of power supply used in the area, consult your dealer or local power supplier.
6. The power cords must not be damaged. Applied pressure, added heat, and tugging may damage the power cord.
7. If the equipment is not use for long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
8. Do not overload the AC outlets or extension cords. Electrical shocks or fires may occur from overloading.
9. Do not touch the power source during a thunderstorm.
10. Use your thumb and index finger, grip firmly on the power cord to disconnect from the electrical socket. By pulling the power cord, may result in damaging it.
11. Do not insert objects into the openings.
12. Do not place the unit in the presence of high moisture areas.
13. Remember to keep the unit away from the presence of dust.

14. Do not cover or block the openings on the top and back sides of the Engine Box unit. Inadequate ventilation may cause overheating thus reducing the lifespan of the unit.

15. Unless proper ventilation is present, do not place unit in an enclosed area; such as a built-in shelf. Keep a minimum distance of 10 cm around vent hole.

16. If the unit is not functioning properly, observe the performance level of the display closely to determine what type of servicing is needed.

17. Do not attempt to repair the Engine Box unit on your own. Disassembling the cover exposes users' to high voltages and other dangerous conditions. Notify and request a qualified service technician for servicing the unit.

18. If any of the following situations occur turn the power source off and unplug the unit. Then contact a qualified service technician.
    (a) A liquid was spilled on the unit or objects have fallen into the unit.
    (b) The unit is soaked with liquids.
    (c) The unit is dropped or damaged.
    (d) If smoke or strange odor is flowing out of the operating unit.
    (e) If the power cord or plug is damaged.
    (f) When the functions of the unit are dysfunctional.

19. When replacement parts are needed for the Monitor display unit, make sure service technicians use replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. If unauthorized parts are used it may result in starting a fire, electrical shock and/or other dangers.

Caution:

DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 80° C (140° F). THIS MAY DAMAGE THE EQUIPMENT.

Declaration of Conformity

CE

This Engine Box is herewith confirmed to comply with the essential protection requirements of Council Directive 93/42/EEC on the approximation of the laws of the Member States relationg to Electromagnetic Compatibility. This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC safety

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Warning:
Any changes or modifications made to the equipment which are not expressly approved by the relevant standards authority could void your authority to operate the equipment.

Caution:
It may cause danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

※ Use a 3V @ 210 mA lithium battery (Model No. CR2032)

Version Change History

Date	Version	Description	Remark
2011/11/29	1.0	First release	Cosa H.

Table of Contents

Acknowledgments ii
Safety Instructions iii
Declaration of Conformity v

Introduction 2

Product Description 2
Package list 3
Features 4
Specifications 5

Getting Started 9

System Set Up 9
Dimension 10
Mounting Installation 11

BIOS setup information 15

Appendix 29

A. Jumper settings and Connectors 29
B. Wake UP on LAN Function 40
C. VGA card dimension 41

Introduction

Product Description

The WPE-796 is designed for the Intel® *Intel Core i3/i5/i7 CPU*. It is based on the Intel's Q57 Express chipset and it comes with two dual-channel DDR3 memory slots and 8GB memory capacity for faster system responsiveness and support of 64-bit computing. The WPE-796 engine box is aimed for high performance PC in the digital, communications and industrial sector.

Package list

Before you begin installing your Digital Signage Engine Box, please make sure that the following items have been shipped:

- The WPE-796 engine box
- One CD containing user manual, QIG, chipset drivers
- Rubber foot x 4
- AC Power cord x 1
- L type Wall Mounting bracket x 2
- M3L6 Screws x 4
- M4L6 Screws x 4
- Hollow Mesh cover x 1
- Flat Mesh cover x 1
- M2L5 screws x 4 (for mesh cover use)

Features

- *Intel Q57 + ICH9 chipset Platform*
- *Intel Core i3/i5/i7 CPU support (95W. Max)*
- *Powerful Digital Signage Engine Box, support 1920x1080 HDTV content & 3D application*
- *Compact and low noise design*
- *1U rack design*
- *Noise level under 37dB at 25℃., 45dB at 40℃*
- *One Giga LAN*
- *One PCI-E x 16 Slot for expansion*
- *One PCI-E x 4 Slot for expansion*
- *One Mini PCIe Card extension slot for optional wireless LAN 11 a/b/g/n*
- *Mounting solution: 19" Rack mount / Wall mount*
- *Windows® Win 7 embedded compatible*
- *Kensington lock hole*
- *RoHS compliance*

Specifications

System

CPU	*Intel® Socket LGA 1156, Support Intel Core i3/i5/i7* ***CPU listing:*** *CORE i7-860, 2.80G, 8M Cache, 95W (w/o integrated graphic)* *CORE i5-750, 2.66G, 8M Cache, 95W (w/o integrated graphic)* *CORE i5-660, 3.33G, 4M Cache, 73W* *CORE i5-650, 3.2G, 4M Cache, 73W* *CORE i3-540, 3.06G, 4M Cache, 73W* *Pentium G6950, 2.8G, 3M cache, 73W*
System bus	*2.5GT/s*
Chipset	*Intel® Q57 Express PCH*
Audio	*Realtek ALC268 HD Audio Codec*
LAN	*Marvell 88E8071 Giga LAN x 1*
Memory	*Two DDR3 1066/1333 DIMM sockets **(dual channels)**, supports max. 8 GB*
I/O	*Winbond W83267UHG*
Serial ATA	*SATA II controller (3.0Gb/sec) Port x 1*
USB	*5 USB 3.0 port (I/O side x 3, internal pin head x 2)*
Serial COM	*1 RS-232/422/485 at I/O side*
Mini PCIe	*One Mini PCI express slot for wireless module as option*
WDT	*1~255 second/minutes, software programmable*
Smart fan	*PWM mode*

Storage

HDD	*SATA II 2.5” HDD drive bay x 1*

Expansion

PCIe mini card	*Single 52-pin card-edge type, x1*
PCI-E x16	*Compatible to the PCI Express* Base Specification revision 2.0 x1*
PCI-E x4	*Compatible to the PCI Express* Base Specification revision 2.0 x1*

External I/O

USB	USB 2.0 external x 3 (internal pin head x 2)
LAN	RJ-45 x 1 (Gigabit Ethernet)
COM	DB-9 x 1 (RS-232/422/485)
Audio	Mic-in, Line-out 3.5 mm audio stack
Video	DVI-I x 1

Power

Power Input	Direct AC connector, 90~264VAC, 50/60Hz
Power switch	Power switch at front side x 1
Reset switch	Reset switch at front side x 1
LED status indicator	Power/HDD LED indicator at front side x 1 (Dual color LED), (LED colors: Power: Green / Orange: HDD accessing)
Add on slots power limitation	60W (include PCIe x16 + PCIe x1)

Mechanical & Environmental

Color	SECC, black (Panton no. 8238)
Operating Temperature:	0˚C ~ 50˚C
Storage Temperature	-20˚C ~ 80˚C
Operating Humidity	10 ~ 90%, non-condensing
Storage Humidity	10 ~ 90%, non-condensing
Net Dimensions	430 x 300 x 44.5 mm
Gross Dimensions	550 x 460 x 180 mm
Net Weights	5.5 kg (w/o add-on cards)
Gross Weight	5.8 kg (w/o add-on cards)
Noise level	Under 38dB(normal speed) / 45~48 dB(full speed) at 25℃
Kensington lock hole	I/O side x 1

Options:

1. mini PCIe, 11 a/b/g/n dual band
2. 19" rack mount kit x 1 (Ear type)
3. ATI HD5450 graphic card
4. ATI V4800 graphic card

Accessories:

1. Power Cord x 1
2. Wall mount kit x 1 (L type)
3. CD title x 1
4. Foot rip x 4
5. Hollow Mesh cover x 1

6. *Flat Mesh cover x 1*
7. *Screws*

Regulatory

FCC-B, CE (EMC/LVD), VCCI, UL/cUL, CCC

Shock / Vibration / Drop

Shock

Operating: 15g/0.53 oz, 11 ms, half sine wave
Non-operating: 50g/1.76 oz, 11 ms, half sine wave

Vibration

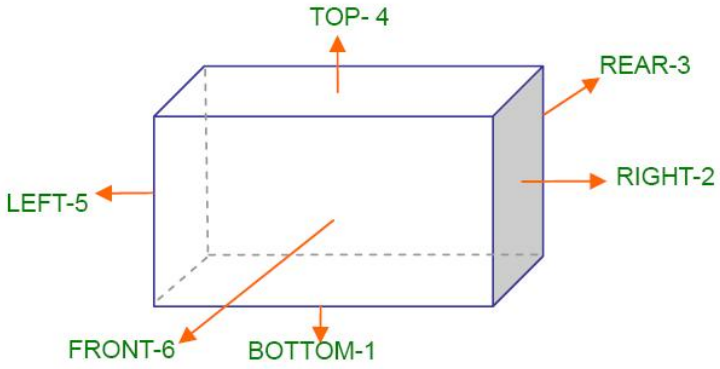
Operation:
5~22HZ: 0.25G
22~350HZ: 0.5G
350~500HZ: 0.25G

Non-operation
5~22HZ: 0.25G
22~350HZ: 2G
350~500HZ: 1G

CYCLE TIME: 1 MINUTE
DIRECTION: X,Y,Z (one direction TIME is 10 MINUTES)

Drop

Drop height: 91 cm
Packing cushion material: EPE
Drop sequence: 6 faces (Total of 6 drops)



Drop sequence	Drop surface	Drop sequence	Drop surface
1	Bottom face	4	Right face
2	Top face	5	Front face
3	Left face	6	Rear face

Getting Started

System Set Up

The following is a summary of the steps in setting up the system for use.

(1). You can fix the system to a mounting fixture using the screw holes on the sides of the system.

(2). Make any required external connections such as the display, keyboard, and LAN.

(3). Plug the appropriate end of the power cord into the power connector on the rear of the system and the plug to an electrical outlet.

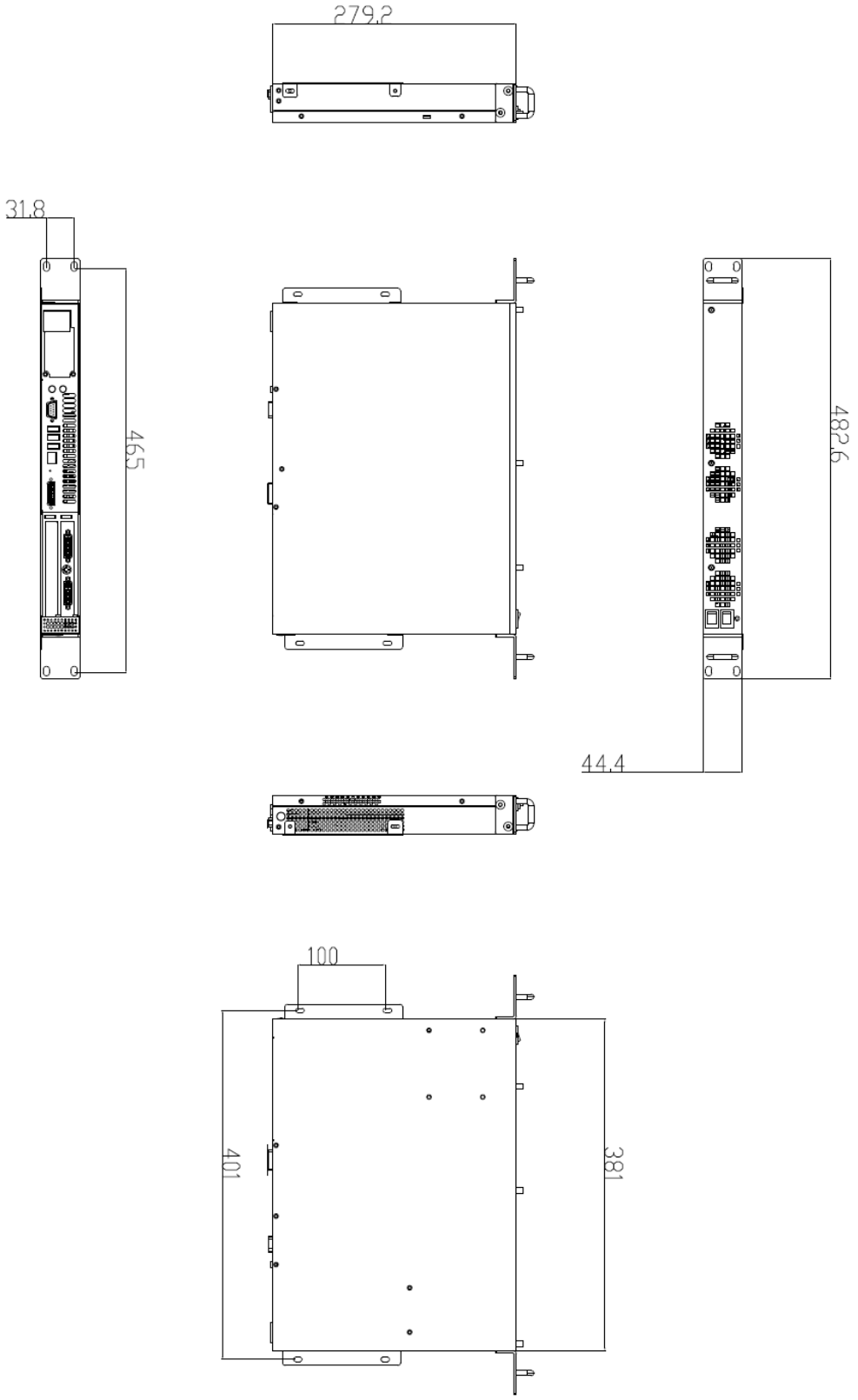
(4). Press the power switch on the front panel of the system once to turn on the system power.

(5). If necessary, run the BIOS SETUP programs to configure the system.

Caution:

In order to boot up system from USB-CD/DVD drive, please connect USB-CD/DVD drive, turn on computer power, keep on pressing "F11" key, go into BIOS quick boot menu, select "USB-CD ROM", WAIT FOR 20 SECONDS, then press enter, system OS will boot up from USB-CD/DVD drive directly.

Dimension



Mounting Installation

The WPE-796 provides several mounting solutions to help system integrators conveniently integrate the Engine Box into their system.

Never use any other mounting brackets except those provided by manufacturer to prevent the unreliable fixing of WPE-796. Mounting installation should be carried out by a professional technician. Please contact the service technician or your retailer if you need this service.

> ***Caution:***
> *Be sure to secure the screws of the mounting bracket tightly. Injuries could result if the WPE-796 isn't properly secured to the mounting bracket.*

Wall Mounting

Caution:
When WPE-796 is erected to mount on a monitor, the ambient temp should not be over 45℃.

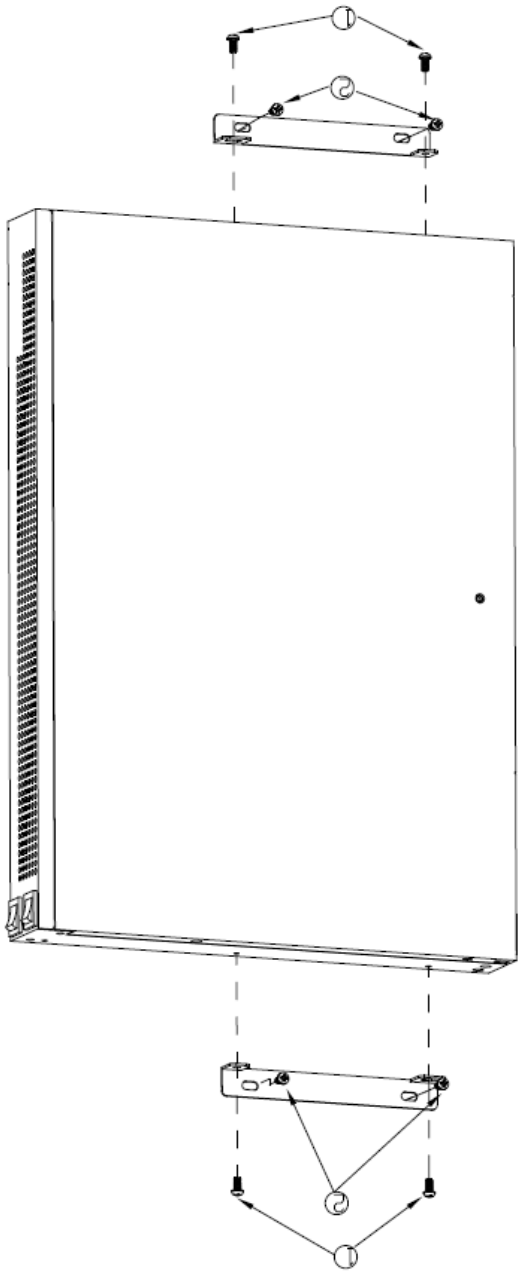
i) When I/O face right

Content:

- L type bracket x 2
- M3L6 Screws x 4 (screw on WPE-796)
- M4L6 Screws x 4 (screw on mounting place)

(Wall mounting kit has been attached in accessory box of unit)

Step 1: Fix the L type bracket on WPE-796 unit with M3L6 screws.
Step 2: Use M4L6 four screws to screw the WPE-796 on mounting place.



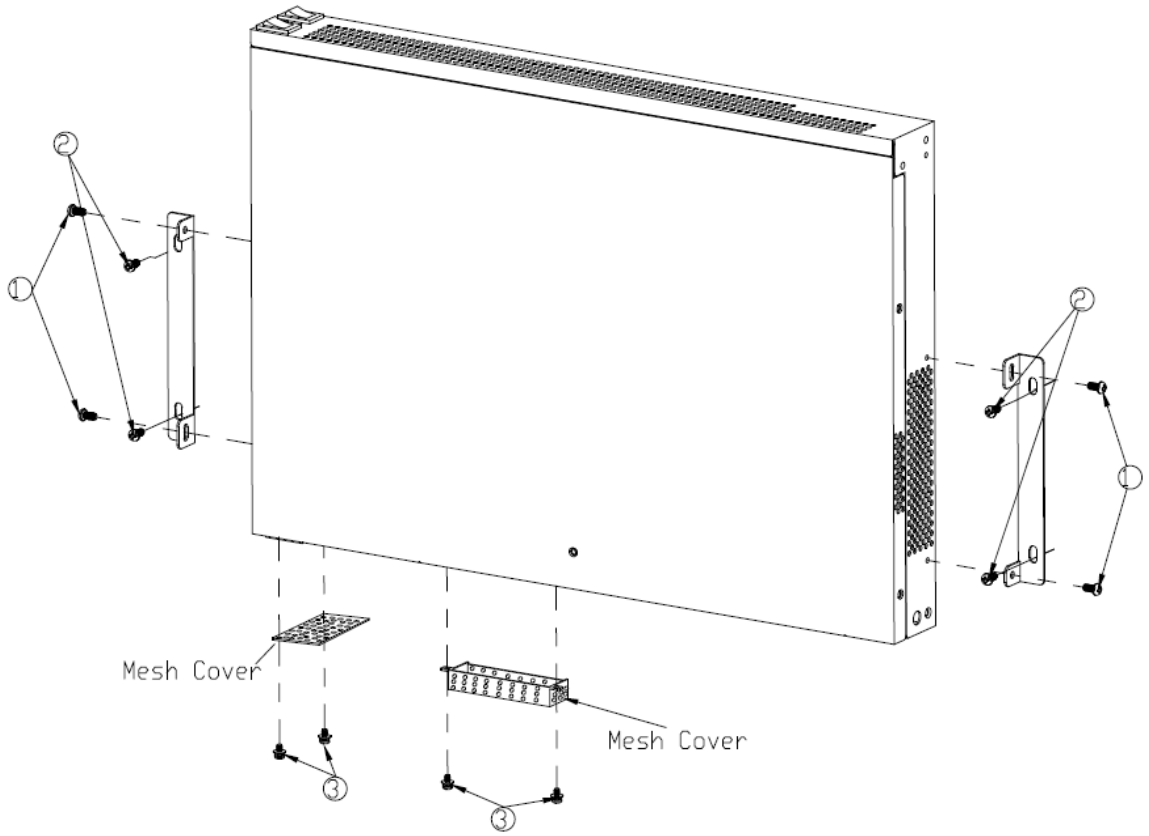
ii) When I/O face down

Content:

- L type bracket x 2
- M3L6 Screws x 4 (Screw on WPE-796)
- M4L6 Screws x 4 (Screw on mounting place)
- Hollow Mesh cover x 1
- Flat Mesh cover x 1
- M2L5 Screws x 4 (Screw on mesh covers)

Step 1: Fix the L type bracket on WPE-796 unit with M3L6 screws.
Step 2: Use M4L6 four screws to screw the WPE-796 on mounting

place.
Step 3: Use M2L5 four screws to screw the mesh covers on WPE-796 I/O bracket.



Rack Mounting (Option)

"Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

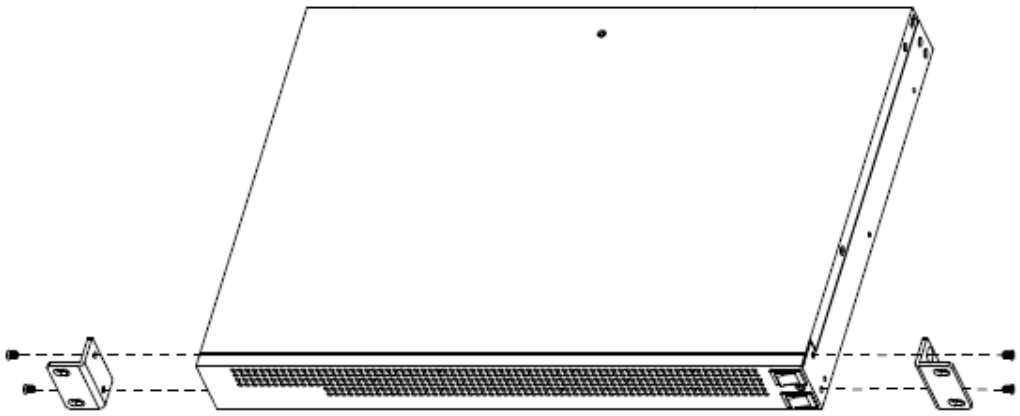
D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."

Content:

- Rack-L bracket x 1
- Rack-R bracket x 1
- M4L6 Screws x 4 (Screw on WPE-796)
- M5L12 screws x 4 (Screw on rack)

Step 1: Use M4L6 four screws to screw the Rack-L bracket and Rack-R bracket on WPE-796 two sides.
Step 2: Use M5L12 four screws to screw WPE-796 on Rack.



BIOS setup information

BIOS Introduction

The AMI BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

The AMI BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the Award BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

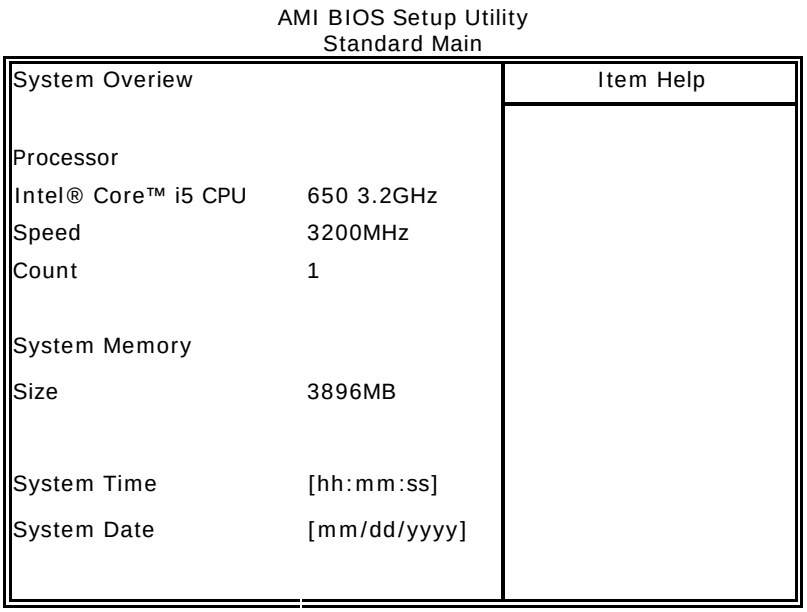
When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

The section below the setup items of the Main Menu displays the control keys for this menu. At the bottom of the Main Menu just below the control keys section, there is another section, which displays information on the currently highlighted item in the list.

***Note**:* *If the system cannot boot after making and saving system changes with Setup, the Award BIOS supports an override to the CMOS settings that resets your system to its default.*

Warning: *It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.*

Main



At the bottom of the menu are the control keys for use on this menu. If you need any help in each item field, you can press the <F1> key. It will display the relevant information to help you. The memory display at the lower right-hand side of the menu is read-only. It will adjust automatically according to the memory changed. The following describes each item of this menu.

System Time
Configure system Time

Date
Configure system Date

Advanced

AMI BIOS CMOS Setup Utility
Advanced

Advanced Setting	Item Help
WARNING: Setting wrong values in below sections may cause system to malfunction.	
CPU Configuration	
IDE Configuration	
SuperIO Configuration	
Hardware Health Configuration	
APM Configuration	
ACPI Configuration	

CPU Configuration

MPS and ACPI MADT ordering

MPS and ACPI MADT ordering. Modren ordering for Windows XP or Later OSes. Legacy ordering for Windows 2000 or earlier OSes.

Intel(R) Virtualization Tech

When enabled, a VMM can utilize the additional HW Caps. Provided by Intel(R) Virtualization Tech. Note: A full reset is required to change the setting.

Active Processor Cores

Number of cores to enable in each processor package

A20M

Legacy OSes and APs may need A20M enabled.

Intel(R) Speed Step (TM) tech

Disable: Disable GV3
Enable: Enable GV3

Intel(R) Turbo Mode tech

Turbo mode allows processor cores to run faster than marked frequency in specific condition.

Intel(R) C-STATE tech

CState: CPU idle is set to C2/C3/C4

C State package limit setting

Selected option will program into C State package limit register.

IDE Configuration

Configure SATA as

IDE, RAID, AHCI, Disabled

SATA#1 IDE configuration
Compatible, Enhanced.

SATA#2 IDE configuration
Disabled, Enhanced.

Primary IDE Master

Type
Select the type of device connected to the system.

LBA/Large Mode
Disabled: Disables LBA Mode.
Auto: Enables :BA Mode if the device supports it and the device is not already formatted with LBA Mode disabled.

Block (Multi-Sector Transfer)
Disabled: The Data transfer from and to the device occurs one sector at a time.
Auto: The Data transfer from and to the device occurs multiple sectors at a time if the device supports it.

PIO Mode
Select PIO Mode

DMA Mode
Select DMA Mode
Auto: Auto detected
SWDMAn: Single Word DMAn
MWDMAn: Multi Word DMAn
UDMAn: Ultra DMAn

S.M.A.R.T.
S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Analysis and Reporting Technology.

32Bit Data Transfer
Enable/Disable 32Bit Data Transfer

Primary IDE Slave

Type
Select the type of device connected to the system.

LBA/Large Mode
Disabled: Disables LBA Mode.
Auto: Enables :BA Mode if the device supports it and the device is not already formatted with LBA Mode disabled.

Block (Multi-Sector Transfer)
Disabled: The Data transfer from and to the device occurs one sector at a time.
Auto: The Data transfer from and to the device occurs multiple sectors at a time if the device supports it.

PIO Mode
Select PIO Mode

DMA Mode

Select DMA Mode
Auto: Auto detected
SWDMAn: Single Word DMAn
MWDMAn: Multi Word DMAn
UDMAn: Ultra DMAn

S.M.A.R.T.

S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Analysis and Reporting Technology.

32Bit Data Transfer

Enable/Disable 32Bit Data Transfer

Secondary IDE Master

Type

Select the type of device connected to the system.

LBA/Large Mode

Disabled: Disables LBA Mode.
Auto: Enables :BA Mode if the device supports it and the device is not already formatted with LBA Mode disabled.

Block (Multi-Sector Transfer)

Disabled: The Data transfer from and to the device occurs one sector at a time.
Auto: The Data transfer from and to the device occurs multiple sectors at a time if the device supports it.

PIO Mode

Select PIO Mode

DMA Mode

Select DMA Mode
Auto: Auto detected
SWDMAn: Single Word DMAn
MWDMAn: Multi Word DMAn
UDMAn: Ultra DMAn

S.M.A.R.T.

S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Analysis and Reporting Technology.

32Bit Data Transfer

Enable/Disable 32Bit Data Transfer

Secondary IDE Slave

Type

Select the type of device connected to the system.

LBA/Large Mode

Disabled: Disables LBA Mode.
Auto: Enables :BA Mode if the device supports it and the device is not already formatted with LBA Mode disabled.

Block (Multi-Sector Transfer)

Disabled: The Data transfer from and to the device occurs one sector at a time.

Auto: The Data transfer from and to the device occurs multiple sectors at a time if the device supports it.

PIO Mode

Select PIO Mode

DMA Mode

Select DMA Mode
Auto: Auto detected
SWDMAn: Single Word DMAn
MWDMAn: Multi Word DMAn
UDMAn: Ultra DMAn

S.M.A.R.T.

S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Analysis and Reporting Technology.

32Bit Data Transfer

Enable/Disable 32Bit Data Transfer

Hard Disk Write Protect

Disable/Enable device write protection. This will be effective only if device is accessed through BIOS.

IDE Detect Time Out (Sec)

Select the out value for detecting ATA/ATAPI device(s).

Super IO Configuration

Serial Port1 Address

Allows BIOS to Select Serial Port1 Base Addresses.

Hardware Health Configuration

CPUFAN Mode Setting

Fan configuration mode setting

SYSFAN0 Mode Setting

Fan configuration mode setting

APM Configuration

Power Management/APM

Enable or disable APM.

Resume On RTC Alarm

Disable/Enable RTC to generate a wake event

ACPI Configuration

General ACPI Configuration

Suspend mode

Select the ACPI state used for System Suspend.

Repost Video on S3 Resume

Determines whether to invoke VGA BIOS post on S3/STR

Advanced ACPI Configuration

ACPI Version Features

Enable RSDP pointers to 64-bit Fixed System Description Tables. Di ACPI version has some.

ACPI APIC support

Include ACPI APIC table pointer to RSDT pointer list

AMI OEMB table

Include OEMB table pointer to R(X)SDT pointer list

Headless mode

Enable/ Disable Headless operation mode through ACPI

Chipset ACPI Configuration

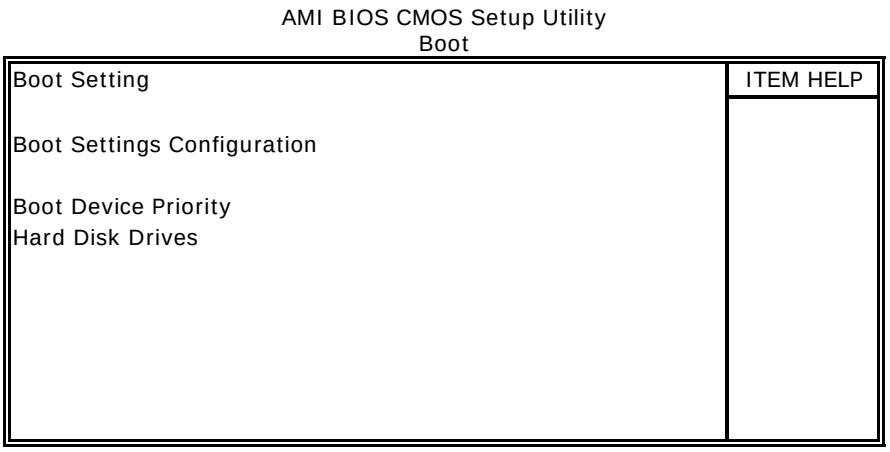
APIC ACPI SCI IRQ

Enable/Disable APIC ACPI SCI IRQ

High Performance Event Timer

Enable/Disable APIC ACPI SCI IRQ

Boot



Boot Settings Configuration

Quick Boot

Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.

Quiet Boot

Disabled: Displays normal POST messages

Enable: Displays OEM Logo instead of POST messages.

Add On ROM Display Mode

Set display mode for Option ROM

Boot up Num-Lock

Select Power-on state for Numlock.

PS/2 Mouse Support

Select sipport for PS/2 Mouse

Wait For “F1” If Error

Wait for F1 key to be pressed if error occurs

Hit “DEL” Message Display

Displays “Press Del to run Setup” in POST

Interrupt 19 Capture

Enabled: Allows option ROMs to trap interrupt 19

Boot Device Priority

1st Boot Device

Specifies the boot sequence from the available devices. A device enclosed in parenthesis has been disabled in the corresponding type menu.

2nd Boot Device

Specifies the boot sequence from the available devices. A device enclosed in parenthesis has been disabled in the corresponding type menu.

Hard Disk Drives

1st Drive

Specifies the boot sequence from the available devices.

Security Setting

AMI BIOS CMOS Setup Utility
Security Setting

Security Setting	ITEM HELP
Change Supervisor Password	
Change User Password	
Boot Sector Virus Protection	

Change Supervisor Password

Install or Change the password.

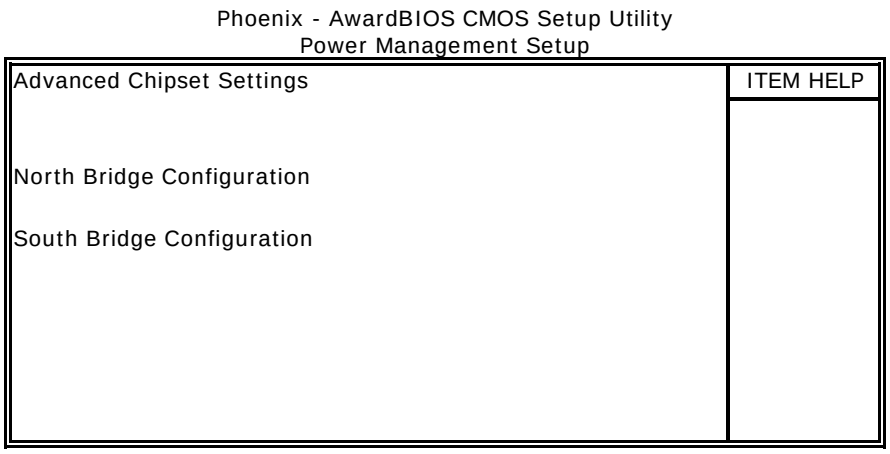
Change User Password

Install or Change the password.

Boot Sector Virus Protection

Enable/Disable Boot Sector Virus Protection.

Power Management Setup



North Bridge Configuration

Memory Remap Feature

ENABLE: Allow remapping of overlapped PCI memory above the total physical memory.

DISABLE: Do not allow remapping of memory.

DRAM Frequency

Auto, 800, 1067, 1333, 1600

Configure DRAM Timing by SPD

Auto, Manual

Memory Hole

Disabled, 15MB-16MB

DRAM Margin Ranks

Disabled, Enabled

Hybrid Multi-Monitor

Allowing for operability of IGD and PEG independently-driven displays

Initiate Graphic Adapter

Select which Graphics controller to use as the primary boot device.

IGD Graphics Mode Select

Select the amount of system memory used by the Internal graphics device.

PEG Port

Auto, Disabled

Video Function Configuration

DVMT Mode Select

DVNT/FIXED Memory

South Bridge Configuration

USB Function

Enable/Disable USB controller in system.

EHCI Controller#1

Enable Intergraded USB 2.0 RMH#1

EHCI Controller#2

Enable Intergraded USB 2.0 RMH#2

HAD Controller

Enabled, Disabled

Restore on AC Power Loss

Power Off, Power On, Last State

Exit Option

AMI BIOS CMOS Setup Utility
Exit Option

Exit Option	ITEM HELP
Save Changes and Exit Discard Changes and Exit Discard Changes Load Optimal Defaults Load Failsafe Defaults	

Save Changes and Exit
Exit system setup after saving the changes.

Discard Changes and Exit
Exit system setup without saving any changes.

Discard Changes
Discards changes done so far to any of the setup questions.

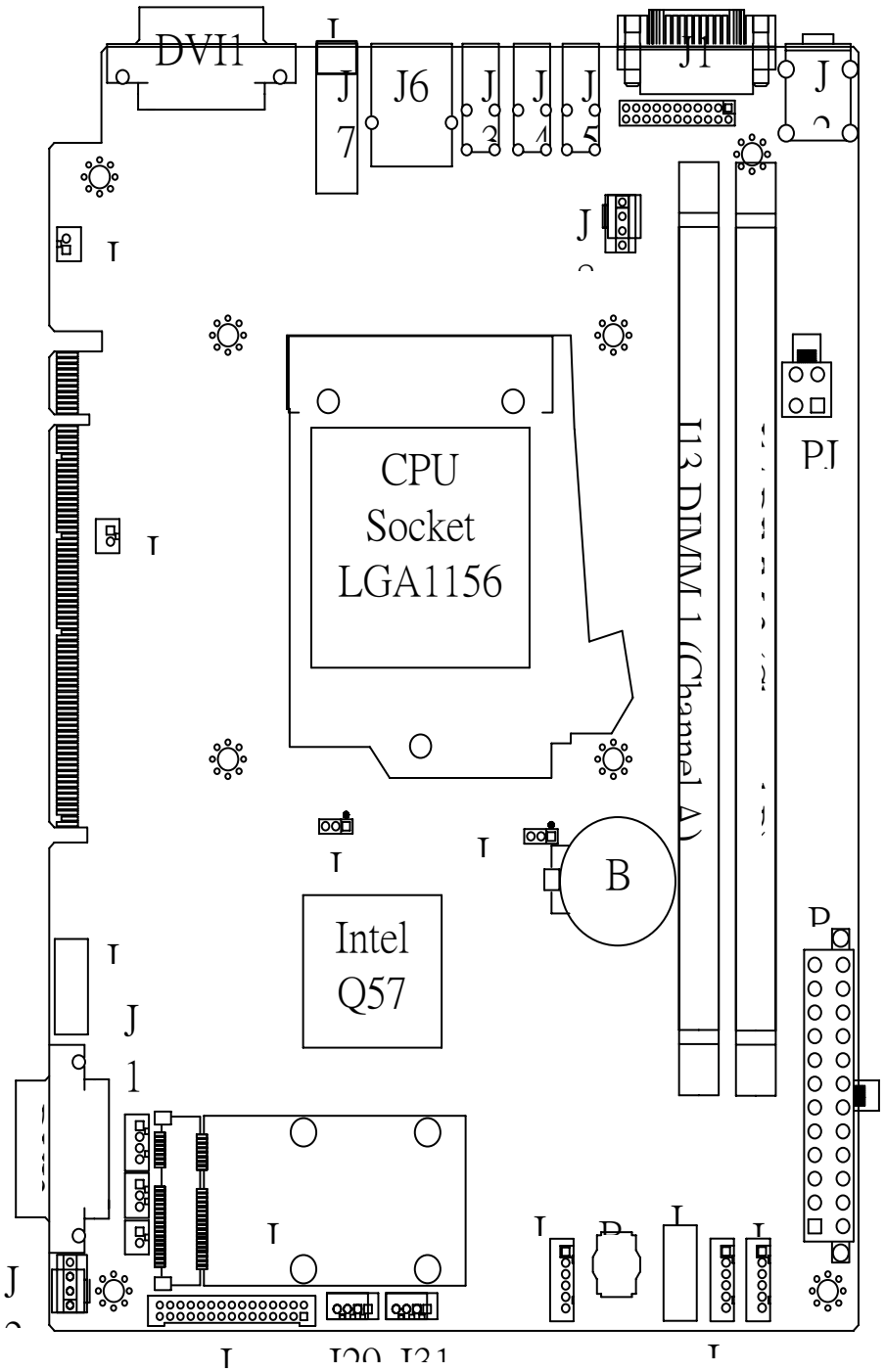
Load Optimal Defaults
Load Optimal Default values for all the setup questions.

Load Failsafe Defaults
Load Failsafe Default values for all the setup questions..

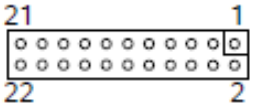
Appendix

A. Jumper settings and Connectors

Note: Some of jumpers or connectors will be removed base on system configuration.



JP1-COM1 Function Selection



Description	Jumper Setting
RS-232	***5-6, 9-11, 10-12, 15-17, 16-18***
RS-422	3-4, 7-9, 8-10,13-15, 14-16, 21-22
RS-485	*1-2, 7-9, 8-10, 19-20*

JP2-PCI Express x16 Static Lane Numbering Reversal

Description	Jumper Setting
No Reversal (for WPE)	***1-2***
Reversal (WMS)	2-3

JP3-Clear COMOS

Description	Jumper Setting
Normal	***1-2***
CMOS Cleared	2-3

DVI1-External DVI-I Interface

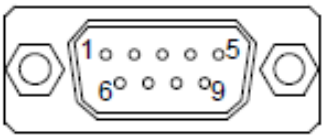
Pin #	Signal Description	Pin #	Signal Description
1	TMDS Data2-	2	TMDS Data+
3	TMDS Data2 Shield	4	NC
5	NC	6	DDC Clock

Pin #	Signal Description	Pin #	Signal Description
7	DDC Data	8	Analog Vertical
9	TMDS Data1-	10	TMDS Data1+
11	TMDS Data1 Shield	12	NC
13	NC	14	+5V
15	GND	16	Hot Plug Detect
17	TMDS Data0-	18	TMDS Data0+
19	TMDS Data0 Shield	20	NC
21	NC	22	TMDS Clock Shield
23	TMDS Clock+	24	TMDS Clock-
C1	Analog Red	C2	Analog Green
C3	Analog Blue	C4	Analog Horizontal
C5	Analog GND		

DVI2-Internal DVI-D Interface

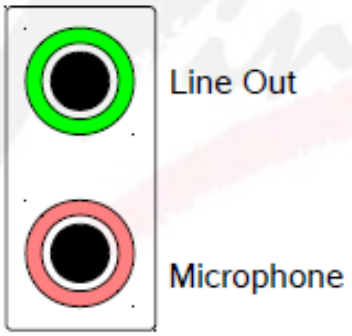
Pin #	Signal Description	Pin #	Signal Description
1	TMDS Data2-	2	TMDS Data+
3	TMDS Data2 Shield	4	NC
5	NC	6	DDC Clock
7	DDC Data	8	NC
9	TMDS Data1-	10	TMDS Data1+
11	TMDS Data1 Shield	12	NC
13	NC	14	+5V
15	GND	16	Hot Plug Detect
17	TMDS Data0-	18	TMDS Data0+
19	TMDS Data0 Shield	20	NC
21	NC	22	TMDS Clock Shield
23	TMDS Clock+	24	TMDS Clock-
C1	NC	C2	NC
C3	NC	C4	NC
C5	NC		

J1-COM port 1(RS-232/RS-422/RS-485)

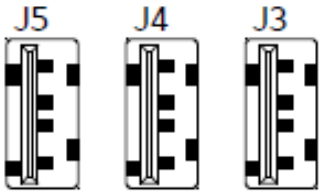


Pin#	Signal Description		
	RS-232	RS-422	RS-485
1	Carrier Detect	Transmit Data -	Transmit Data -
2	Receive Data	Transmit Data +	Transmit Data +
3	Transmit Data	Receive Data +	N/A
4	Data Terminal Ready	Receive Data -	N/A
5	Ground	Ground	Ground
6	Data Set Ready	N/A	N/A
7	Request to Send	N/A	N/A
8	Clear to Send	N/A	N/A
9	Ring Indicator	N/A	N/A

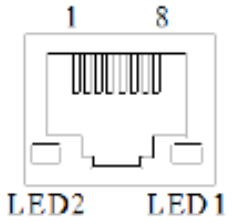
J2-Audio



J3,J4,J5-USB Connector

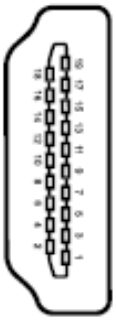


J6-Ethernet Port



Pin#	Description
1	Data0+
2	Data0-
3	Data1+
4	Data2+
5	Data2-
6	Data1-
7	Data3+
8	Data3-
LED1	LINK/ACTIVE LED
LED2	SPEED LED

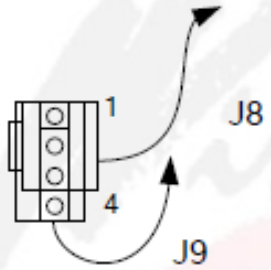
J7-HDMI



Pin#	Description
1	Data0+

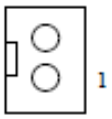
Pin#	Description
2	Data0-
3	Data1+
4	Data2+
5	Data2-
6	Data1-
7	Data3+
8	Data3-
LED1	LINK/ACTIVE LED
LED2	SPEED LED

J8,J9-CPU FAN



Pin#	Description	Mode	
1	Ground	J8 DC mode	J9 PWM mode
2	VCC (0~12V)		
3	Fan Speed detection		
4	Fan speed Control		

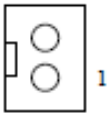
J10,J21-Power Button



Pin#	Description
1	+5V

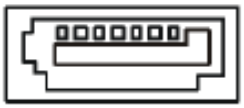
Pin#	Description
2	Power On

J11-External AUX Thermal Detection I/F

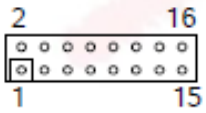


Pin#	Description
1	Thermal +
2	Thermal -

J16,J23-SATA Connector



J17-Debug Port (For debug only)



Pin#	Description	Pin#	Description
1	LPC DATA0	2	RESET#
3	LPC DATA1	4	NC
5	LPC DATA2	6	+3.3V
7	LPC DATA3	8	+5V
9	LPC FRAME#	10	NC
11	LPC CLOCK	12	NC
13	Ground	14	NC
15	NC	16	NC

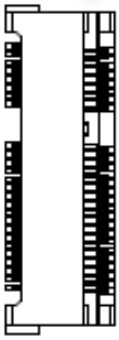
J18-Power/HDD Indicator

Pin#	Description
1	HDD Active Indicator
2	+5V
3	+5V
4	Power indicator

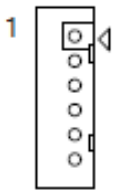
J19-Reset Button

Pin#	Description
1	RESET#
2	Ground
3	Ground

J20-Mini PCI Express Socket

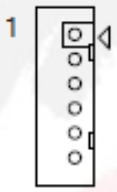


J24,J25-Internal USB Connector



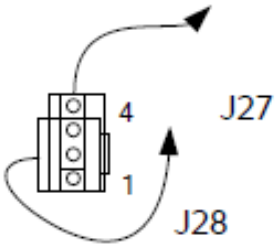
Pin#	Description
1	+5V
2	+5V
3	USB-
4	USB+
5	Ground
6	Ground

J26-PS/2 Keyboard,Mouse



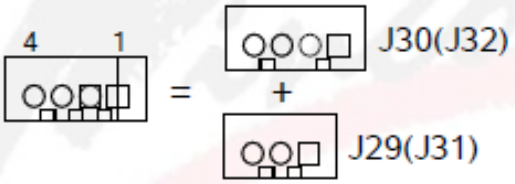
Pin#	Description
1	KB data
2	MS data
3	Ground
4	+5V
5	KB clock
6	MS clock

J27,J28-AUX FAN



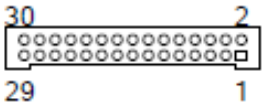
Pin#	Description	Mode	
1	Ground	J27 DC mode	J28 PWM mode
2	VCC (0~12V)		
3	Fan Speed detection		
4	Fan speed Control		

J29,J30,J31,J32-System FAN



Pin#	Description	Mode	
1	Fan speed Control	J29,J31 DC mode	J30,J32 PWM mode
2	Fan Speed detection		
3	VCC(0~12V)		
4	Ground		

J33-Expansion Connector for WMS series

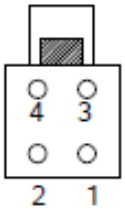


Pin#	Description	Pin#	Description
COM Port 2			
1	Carrier Detect	2	Data Set Ready

Pin#	Description	Pin#	Description
3	Receive Data	4	Request to Send
5	Transmit Data	6	Clear to Send
7	Data Terminal Ready	8	Ring Indicator
9	Ground	10	Ground
USB			
11	Expand USB OC#	12	Expand USB Port 1-
13	Ground	14	Expand USB Port 1+
15	SUSC#	16	Expand USB Port 2-
Fan		18	Expand USB Port 2+
17	AUX Fan speed Control	20	AUX Fan VCC
19	AUX Fan Speed detection	22	NC
21	SMBus Clock	24	Ground
23	SMBus Data	Audio Speaker Out	
25	System Reset#	26	Speaker Out Left
27	Power On#	28	Speaker Out Right
29	Jacke Plug-In detetction	30	Audio Ground

J34-Reset Button

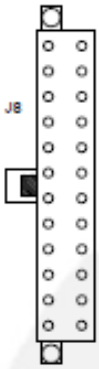
PJ1-CPU ATX-12V



Pin#	Description
1	Ground

Pin#	Description
2	Ground
3	+12V
4	+12V

PJ2-ATX24 Power Connector

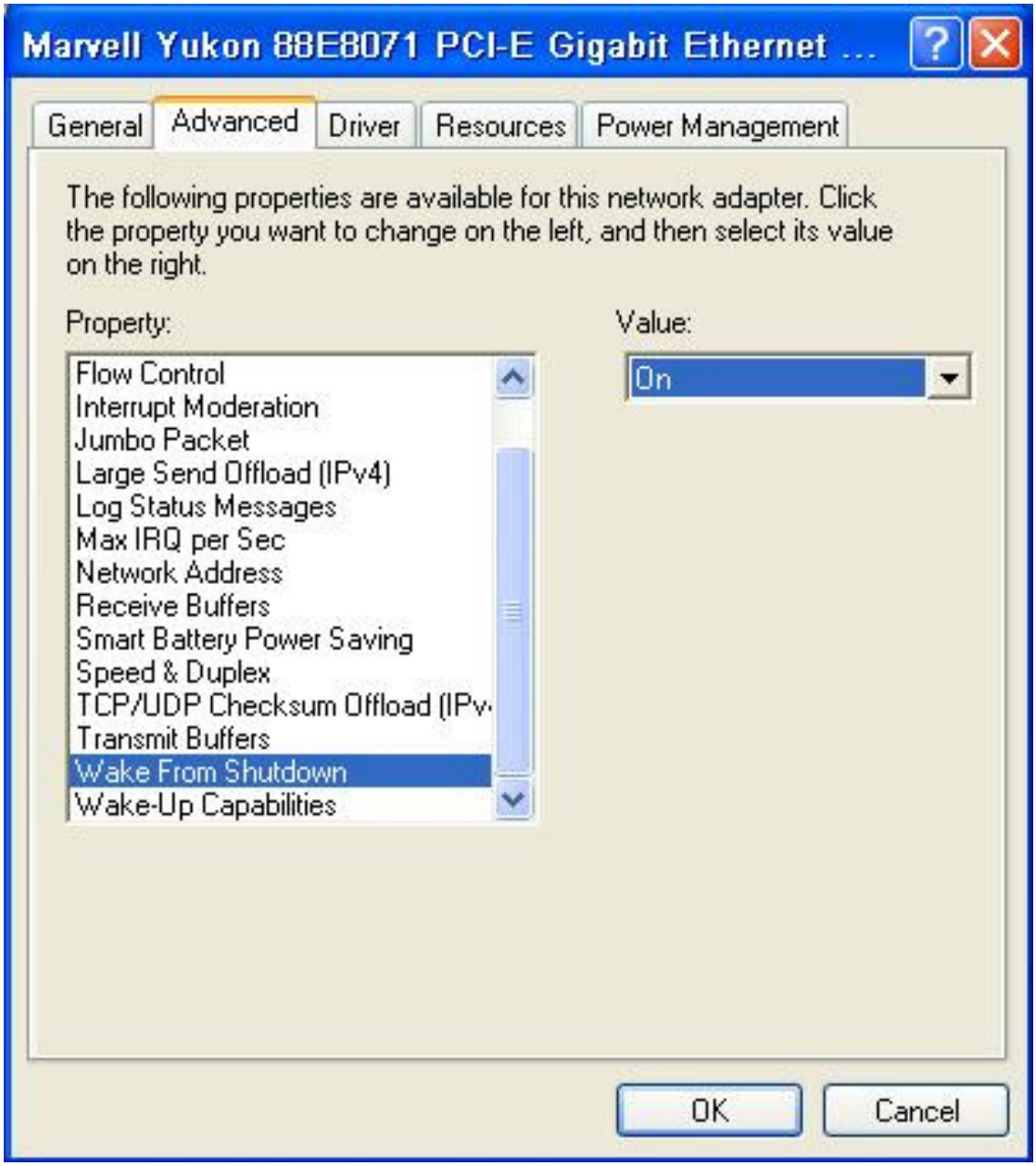


Pin#	Description
1	Ground
2	Voltage(0~+12V)
3	Fan RPM Signal

B. Wake UP on LAN Function

Please make sure the AC power is ON before use the function.

1. Boot into OS (windows XP).
2. In start menu control panel System device manager Network adapters double click Marvell Yukon 88E8071 Advance Wake from Shutdown Item select Wake on Magic packet from power off state.

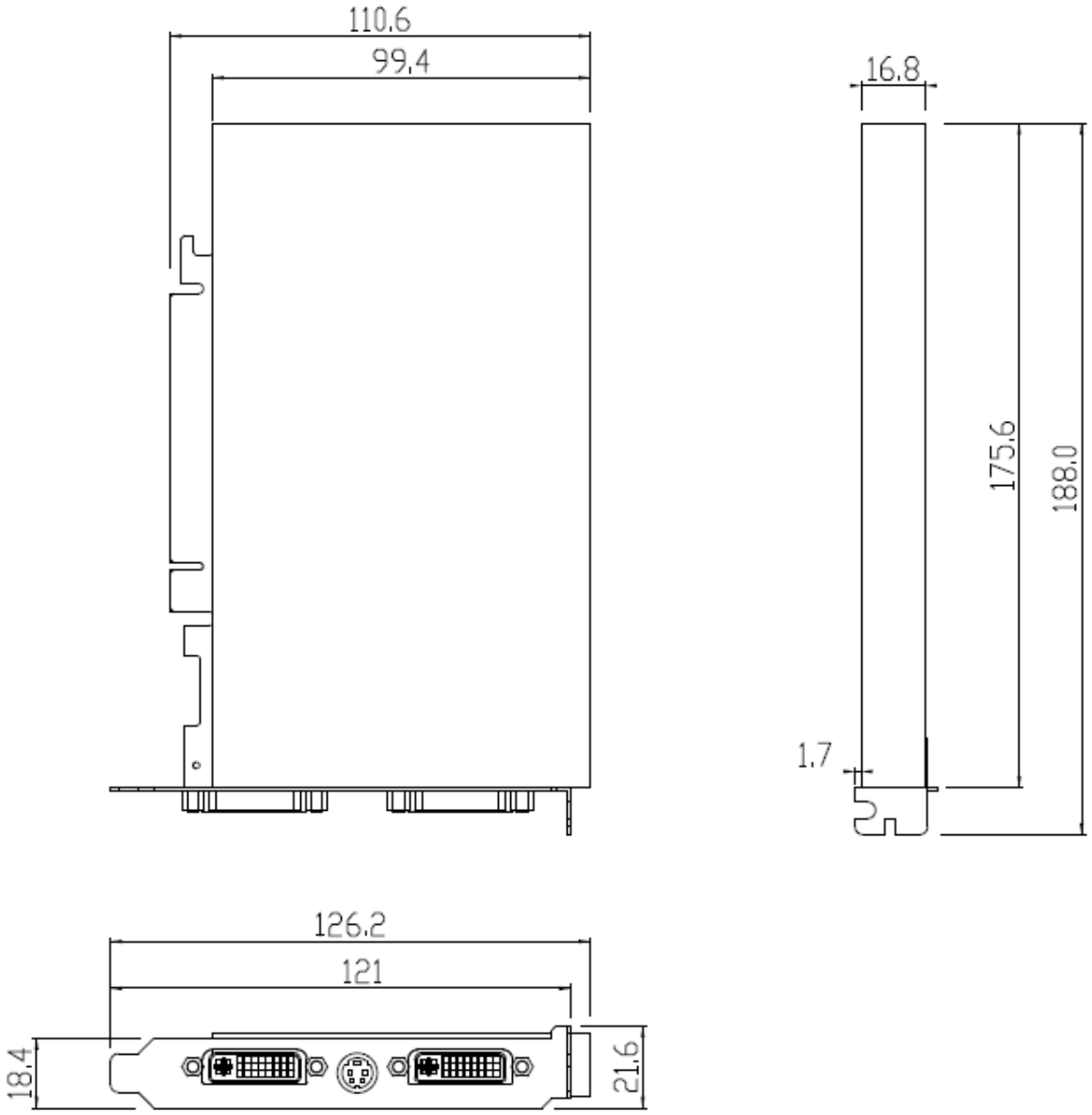


Please shutdown system and wait for wake on LAN after finish these procedures.

C. VGA card dimension

Notice:
Add on slots power limitation: 60W (include PCIe x16 + PCIe x1)

i) When both of graphic card(PCIe x16) and TV tuner card(PCIe x1) insert in WPE-796.



ii) When insert graphic card only.